

1550nm

C-15-DFB-TX-SXXXX
 C-15-DFB-RX-SXXXX
 C-15-DFB-PX-SXXXX/XXX-X

1550nm MQW-DFB Laser Diode Module

Features

- Un-cooled laser diode with MQW structure
- High temperature operation without active cooling
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode
- Complies with Bellcore TA-NWT-000983
- Single frequency operation with high SMSR

Packaging

- TOSA
- FC/ST/SC receptacle package with 2-hole flange
- Un-cooled fiber pigtailed with optional FC/ST/SC/MU connector

Application

- Design for fiber-optics networks



Note:

1. Pin assignment can be customized.
2. Specifications subject to change without notice.
3. Selected wavelength is available for WDM application

Handling Precautions

This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

Absolute Maximum Ratings(Tc=25°C)

Parameter	Symbol	Value	Unit
Fiber Output Power L/M/H/2	P_f	0.6(L)/1(M)/2(H)/2.6(2)	mW
LD Reverse Voltage	V_{RLD}	2	V
PD Reverse Voltage	V_{RPD}	10	V
PD Forward Current	I_{FPD}	2.0	mA
Operating Temperature	T_{opr}	0~+70	°C
Storage Temperature	T_{stg}	-40~+85	°C

(All optical data refer to a coupled 9/125μm SM fiber)

Optical and Electrical Characteristics(Tc=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Threshold Current	I_{th}	-	10	15	mA	CW
Fiber Output Power L M H 2	P_f	0.2 0.5 1 2	- - 1.6 2.5	0.5 1 - -	mW	CW, $I_{th}+30mA$, kink free
Peak Wavelength	λ	1535	1550	1565	nm	Note 3
Side mode Suppression	S_r	30	35	-	dB	CW, $P_f=P_f(\text{Min})$, 0~70°C
Forward Voltage	V_F	-	1.2	1.5	V	CW, $P_f=P_f(\text{Min})$
Rise/Fall Time	t_r / t_f	-	-	0.3	ns	$I_{bias}=I_{th}$, 10~90%
Tracking Error	$\Delta P_f/P_f$	-	-	±1.5	dB	APC, 0~70°C
PD Monitor Current	I_m	100	-	-	μA	CW, $P_f=P_f(\text{Min})$, $V_{RPD}=2V$
PD Dark Current	I_{DARK}	-	-	0.1	μA	$V_{RPD}=5V$
PD Capacitance	C_t	-	6	15	pF	$V_{RPD}=5V$, $f=1MHz$

Ordering Information

C-15-DFB-XX-SXXXX/XXX-X

Wavelength
15=1550nm

Package
T=TOSA
R=Receptacle
P=Pigtail
Pin Assignment
"- " =A Type
B =B Type
D =DType

Connector
FC/ST/SC/MU/LC/-
Fiber Output Power
L/M/H/2
"I" = Isolator
"- " = No isolator

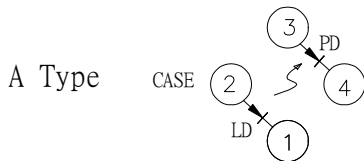
- = PC Fiber
APC = APC Fiber
Flange type (-;O;V;K)

DFB LD Module-receptacle

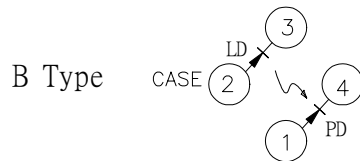
Part Number : C-15-DFB-RX-SXXXXX

LD Pin Assignment

Units in mm



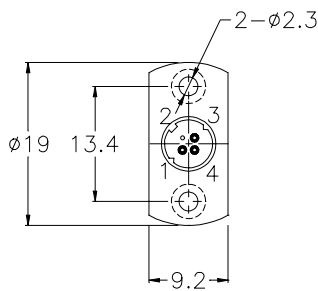
- Pin 1 : Laser Cathode
- Pin 2 : Laser Anode and Case Gnd
- Pin 3 : Monitor Diode Anode
- Pin 4 : Monitor Diode Cathode



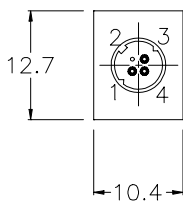
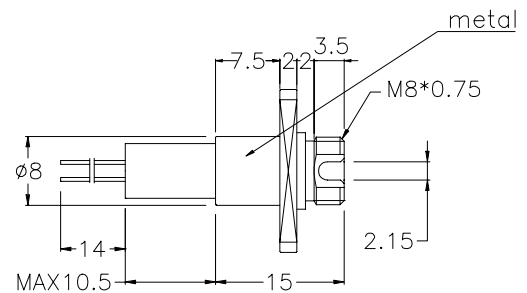
- Pin 1 : Monitor Diode Anode
- Pin 2 : Laser Anode and Case Gnd
- Pin 3 : Laser Cathode
- Pin 4 : Monitor Diode Cathode



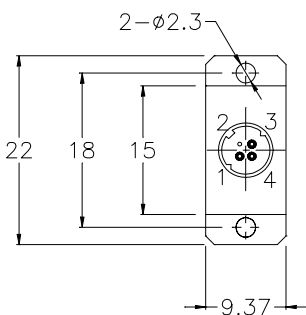
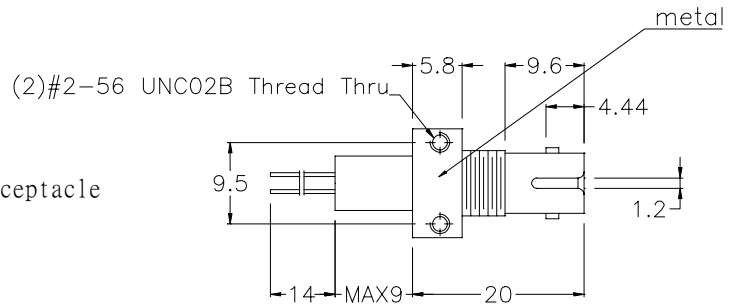
- Pin 1 : Laser Anode and Monitor Diode Cathode
- Pin 2 : Case Gnd
- Pin 3 : Laser Cathode
- Pin 4 : Monitor Diode Anode



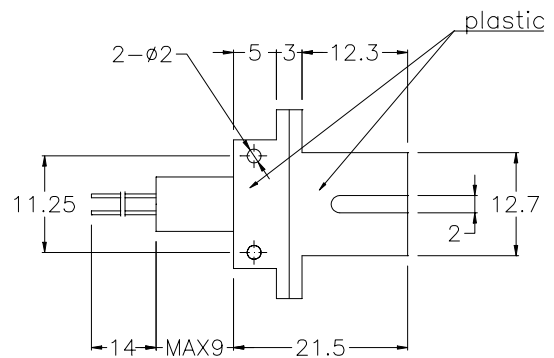
FC Receptacle



ST Receptacle



SC Receptacle

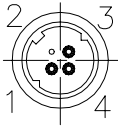


DFB LD Module-TOSA

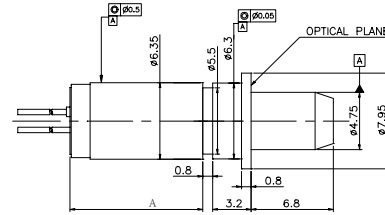
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Packaging Dimension

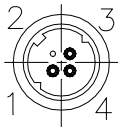
Units in mm



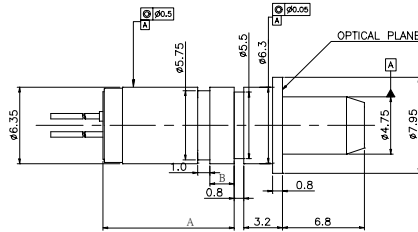
SC TOSA (L&M Power)
 C-15-DFB-TX-SSCXX



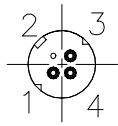
DIMENSION A (L&M POWER): 7.9~8.6mm



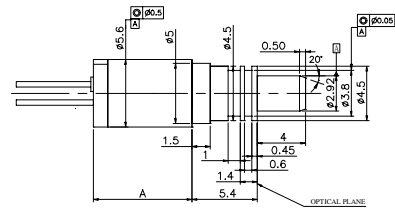
SC TOSA (H&2 Power)
 C-15-DFB-TX-SSCXX



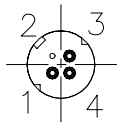
DIMENSION (H&2 POWER) A: Max 10.7mm
 B: Max 2.5 mm



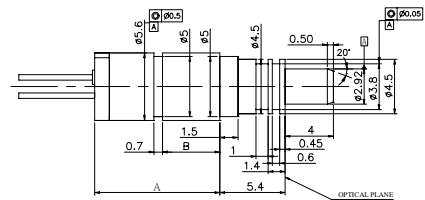
LC TOSA (L&M Power)
 C-15-DFB-TX-SLCXX



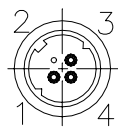
DIMENSION A (L&M POWER): 7.9~8.6mm



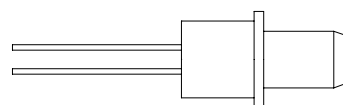
LC TOSA (H&2 Power)
 C-15-DFB-TX-SLCXX



DIMENSION (H&2 POWER) A: Max 10.7mm
 B: Max 5.1 mm



Customer Specified
 TOSA

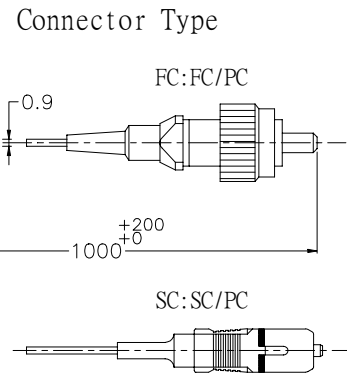
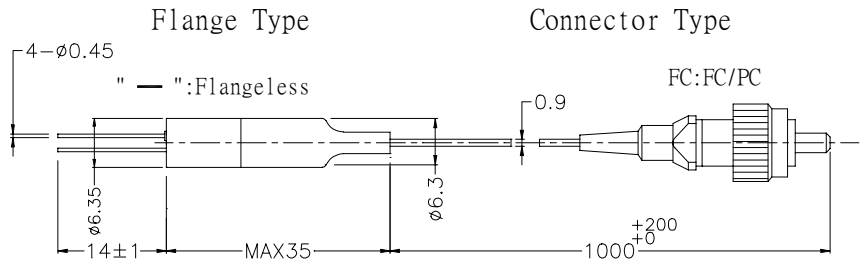
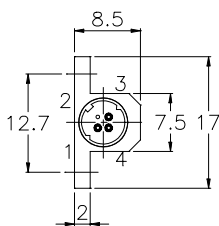
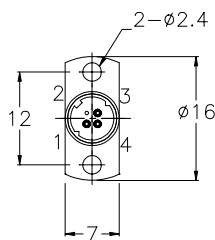
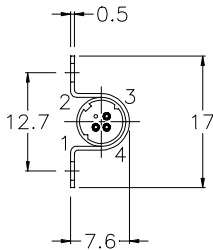
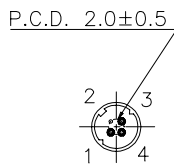


DFB LD Module-pigtailed

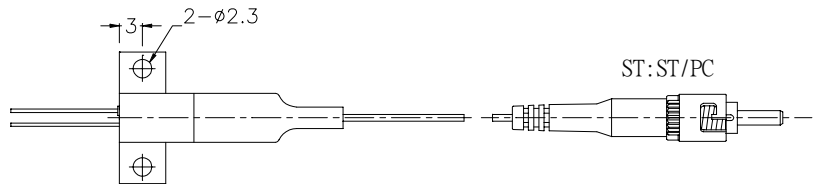
Part Number : C-15-DFB-PX-SXXXX/XXX-X

Packaging Dimension

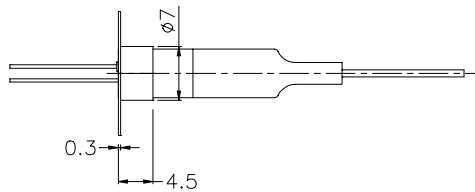
Units in mm



"O":Horizontal (Omega Housing)



"V":Vertical



"K":Horizontal (KX Housing)

